Embroidery Machine

Project Instruction Booklet

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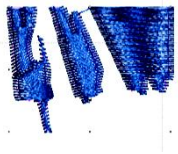
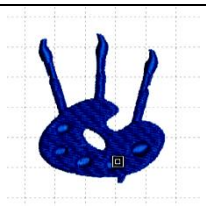
Project Overview

In this project students will learn how to use the following tools and shop materials to create an embroidered design on clothing or other textiles: embroidery machine, USB memory stick, embroidery machine hoops, high-quality embroidery thread, bobbins, embroidery backer, steam iron, Corel Draw software, embroidery machine design software, and scissors. In addition, students will learn the importance of shop cleanliness and safety procedures.

Introduction to Preparing an Image for the Embroidery Machine

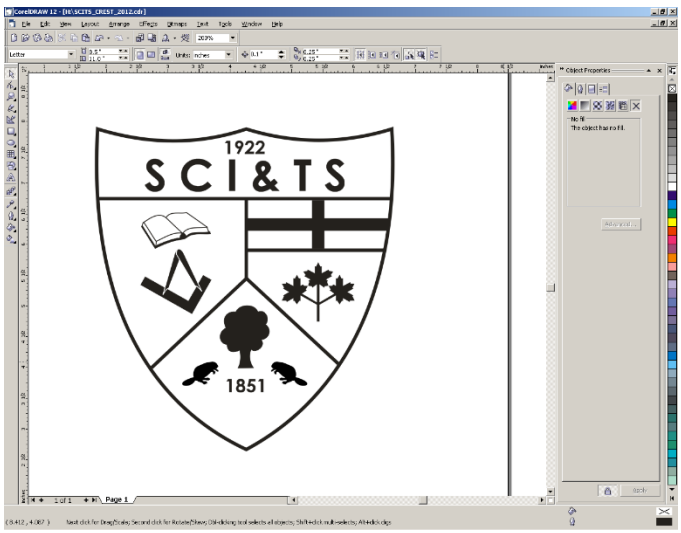
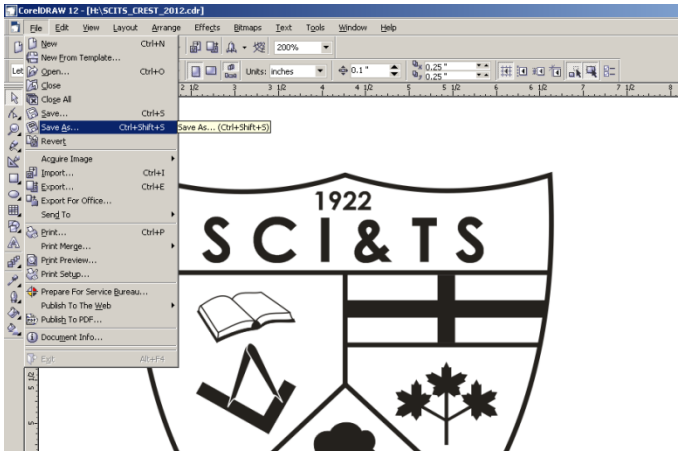
Make sure the design is a single colour and will work for the purpose of cutting out a sticker. Here are some examples of what will and will not work:

Image				
Will It Work?	**No**	**Maybe**	**Yes**	**Yes**
Why?	Photos result in groups of stitches where the image is darkest, and no longer looks like the original image.	Colour drawings might embroider decently, but often lack the fine details of the original image.	Thin lines work out well as long as the overall image is not too small.	Black and white drawing silhouettes work well at any size.
Resulting Embroidery				

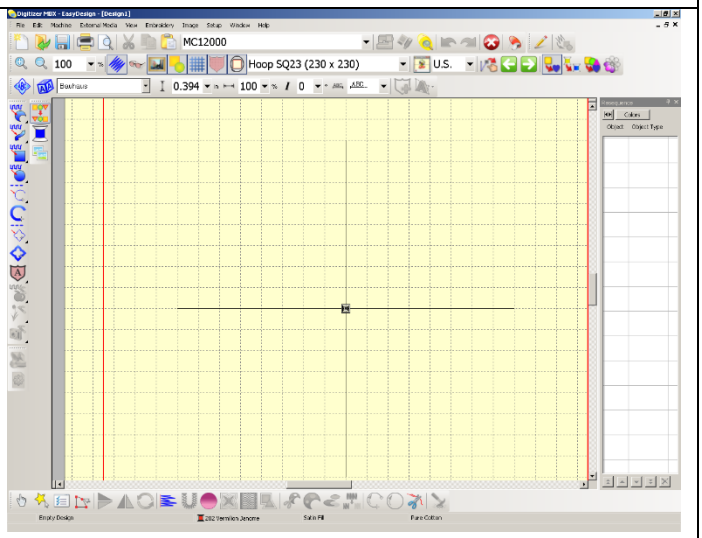
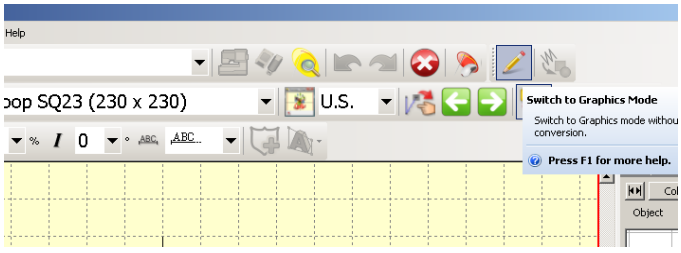
Note: multi-colour embroidery patterns are possible in multiple passes on the embroidery machine, but the class will only be learning single-colour (single pass) embroidery techniques.

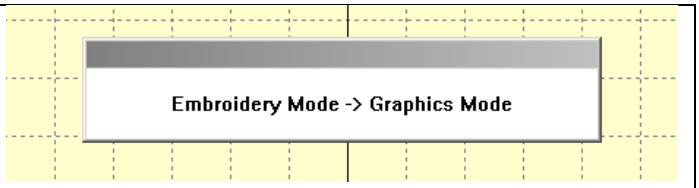
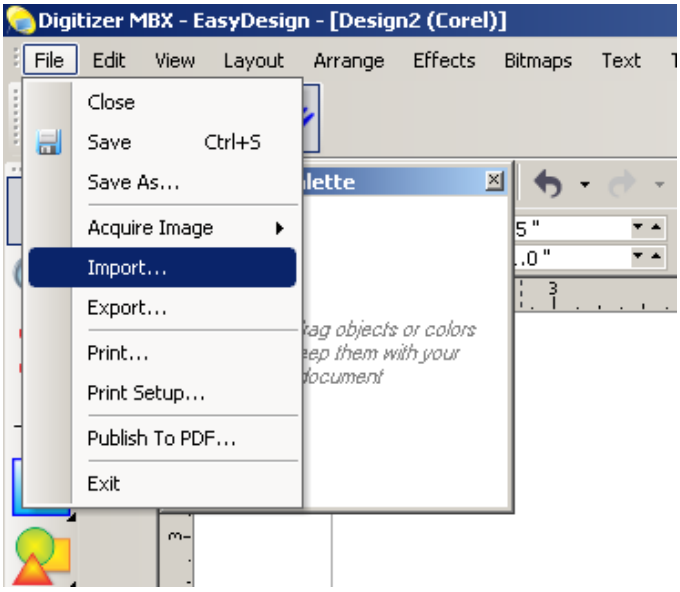
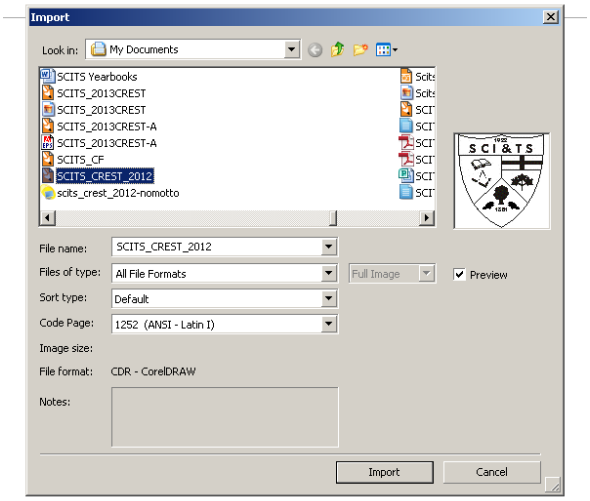
Step-By-Step Instructions

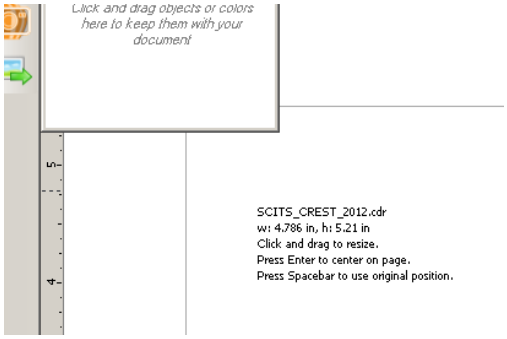
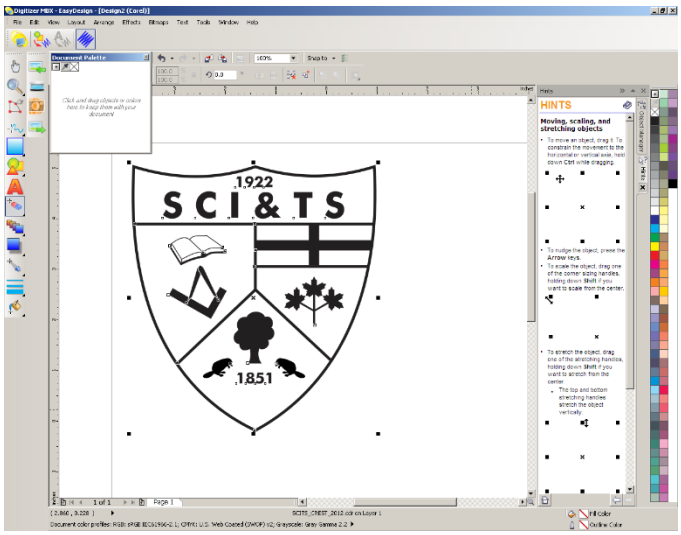
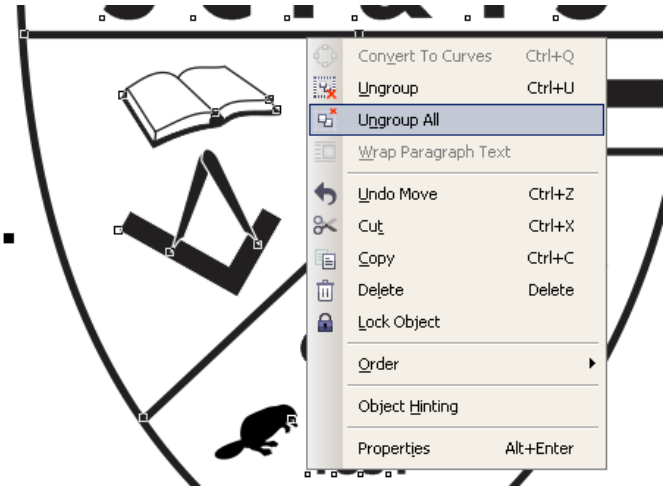
Part 1: On Your Own Computer

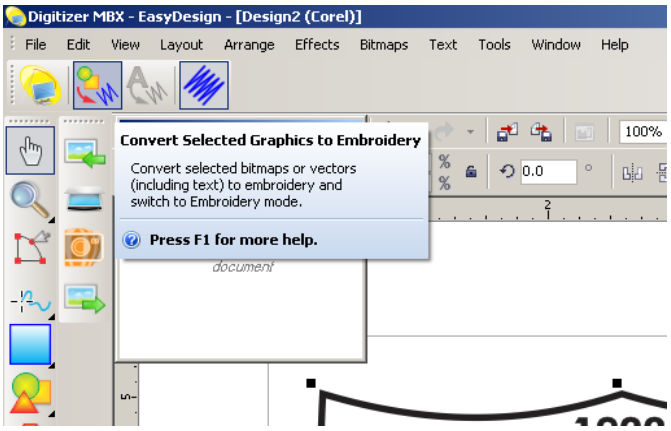
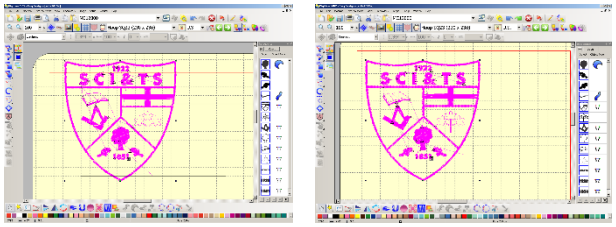
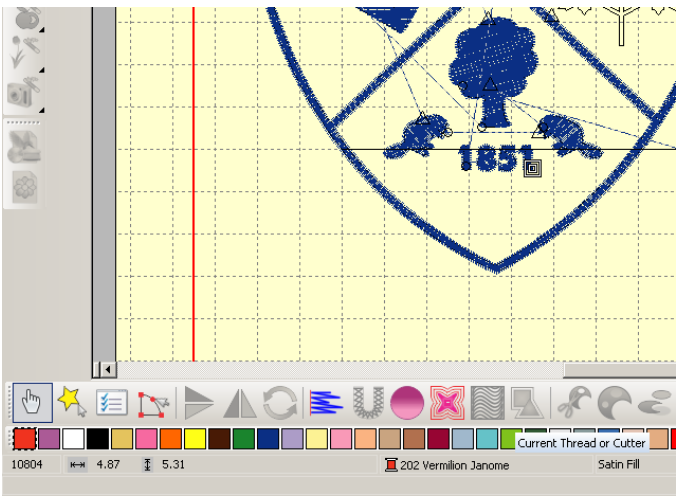
1.	Create a drawing in Corel Draw.	
2.	Save the image to your H:\ drive.	

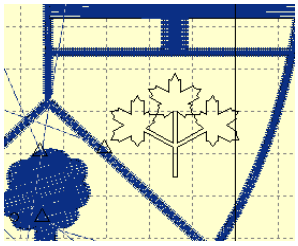
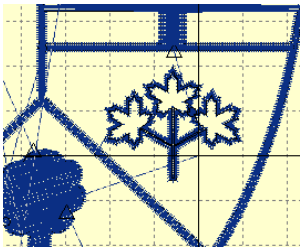
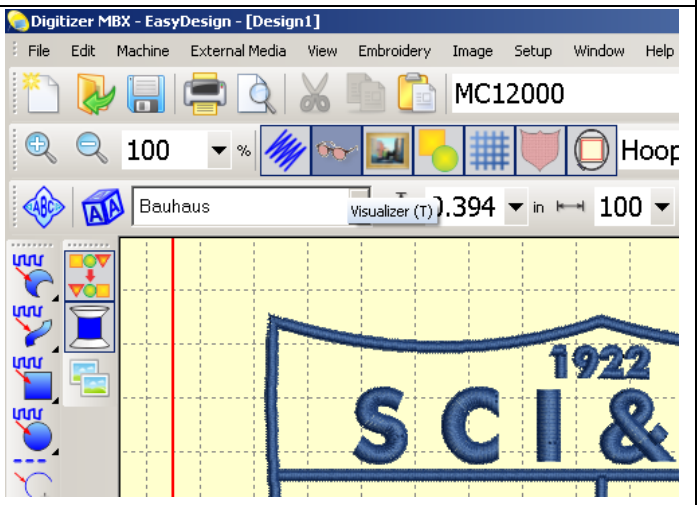
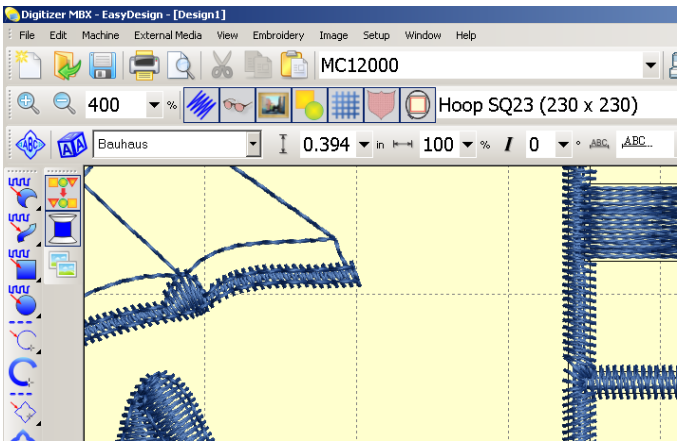
Part 2: On the Embroidery Computer

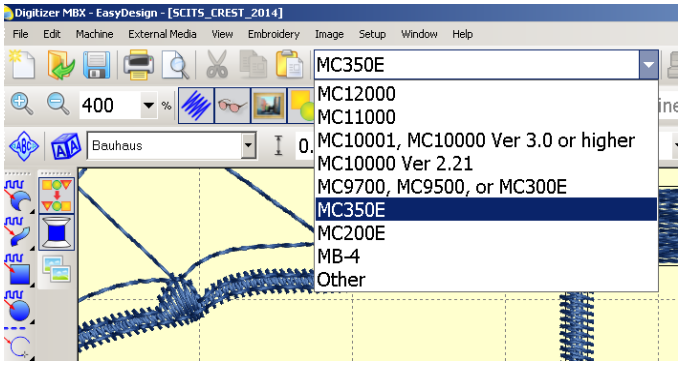
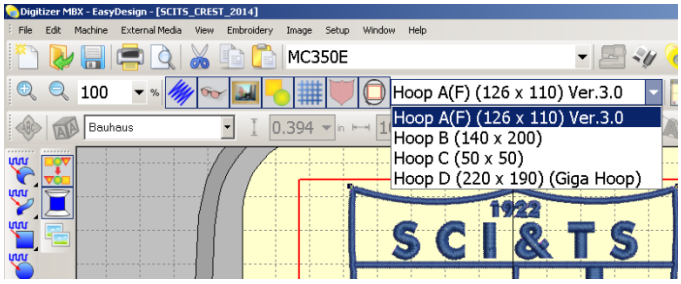
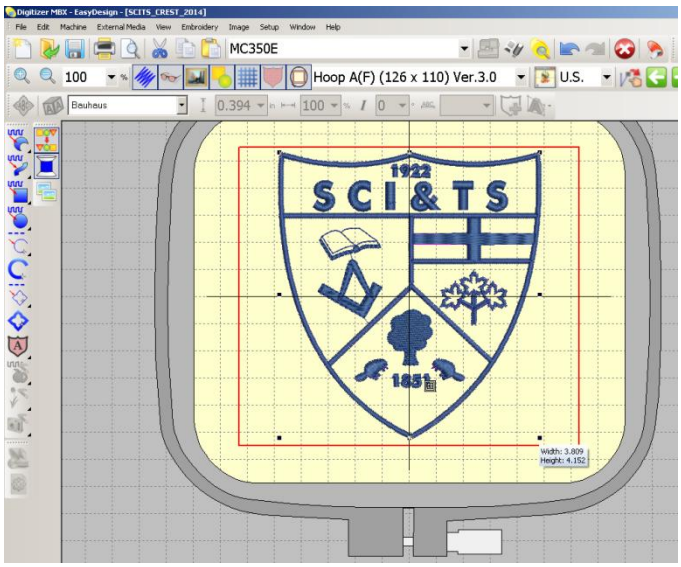
3.	Open Janome EasyDesign.	
4.	Wait for Janome EasyDesign to start. **Tip:** the text at the bottom of this screen says, "this may take several minutes." It's true.	
5.	This is what your screen should look like when Janome EasyDesign finally starts up.	
6.	Click the Pencil tool to switch to "Graphics Mode." This will allow you to use your Corel Draw drawing in EasyDesign. A brief message should appear that says "Embroidery Mode ->	

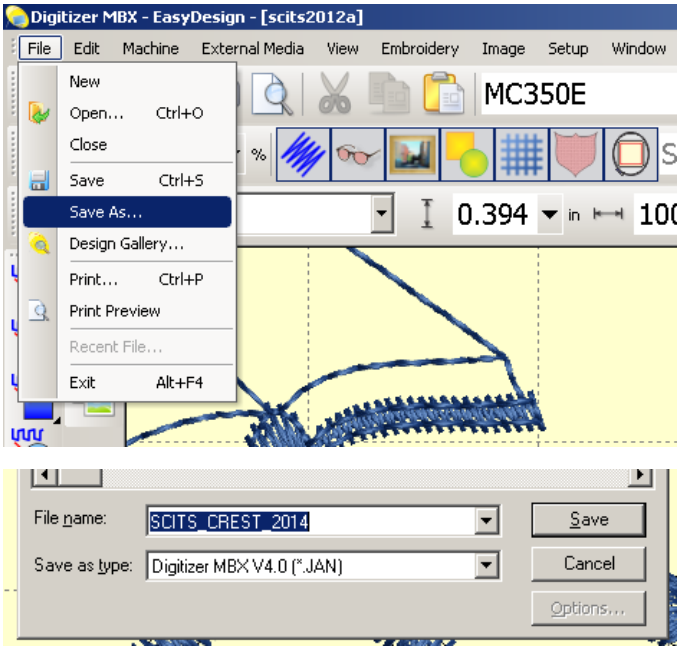
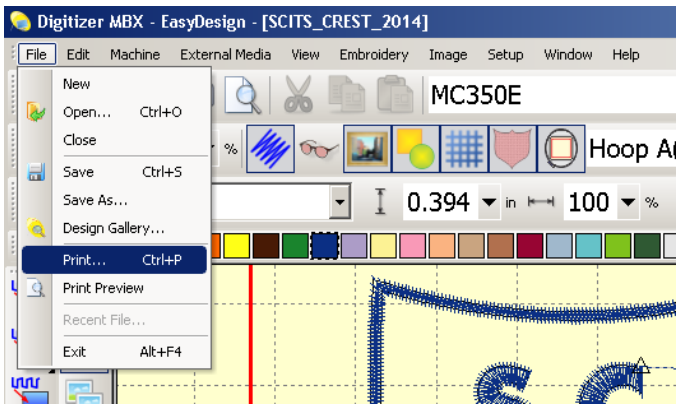
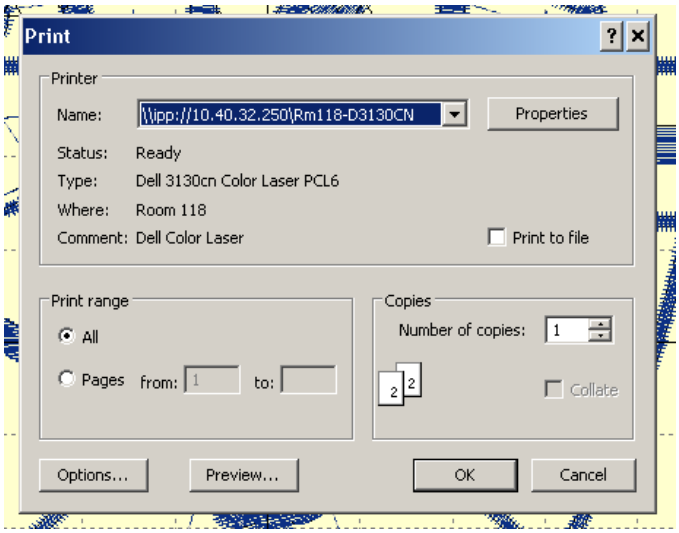
	Graphics Mode.”	
7.	Click File -> Import.	
8.	Select the file you created in Corel Draw. **Tip:** you can see a preview of the Corel Draw image if you put a checkmark in the “Preview” box.	

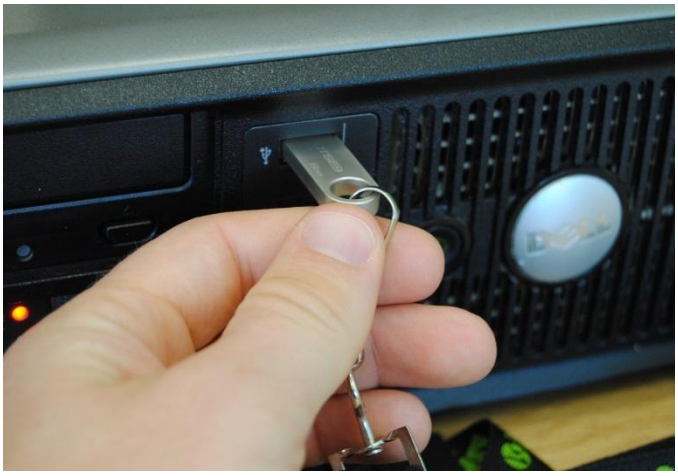
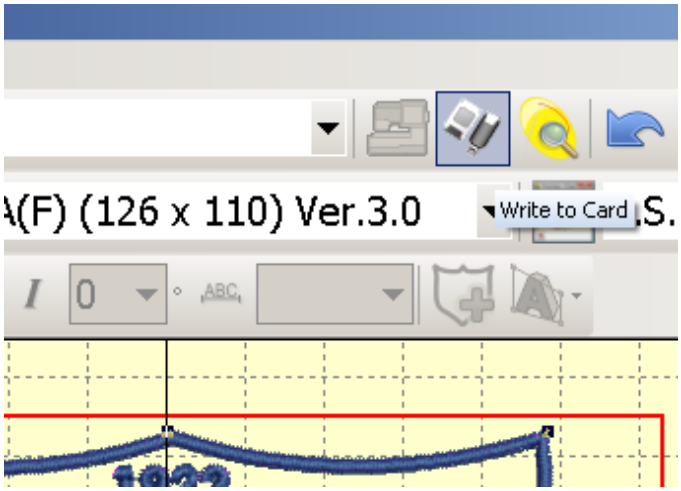
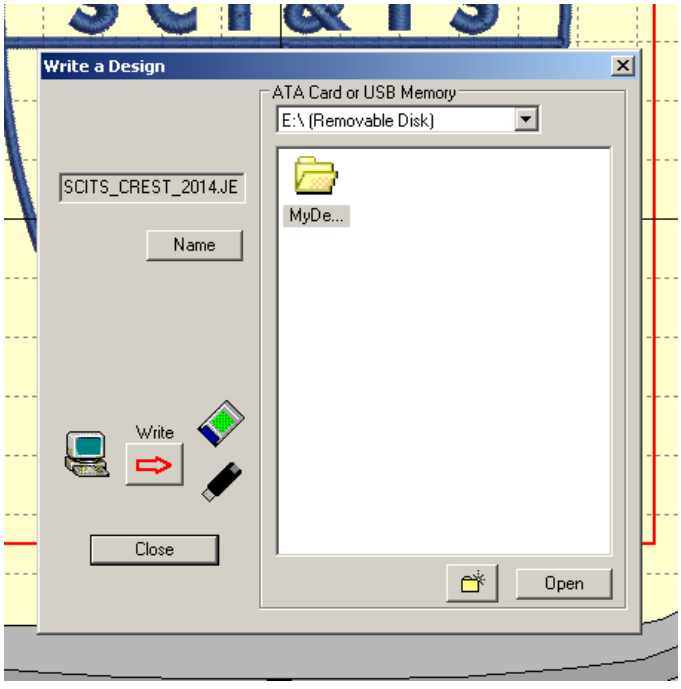
9.	To place your image onto the page as you originally designed it, press the Spacebar.	
10.	Your image should appear on the page. Press the “CTRL” (control) key and the letter “A” key at the same time on the keyboard to Select All of your drawing. **Tip:** another way to do this is to click Edit -> Select All -> Objects from the menu bar.	
11.	Right-click on the image and click the “Ungroup All” option from the drop-down menu that appears. **Tip:** another way to do this is to click Arrange -> Ungroup All from the menu bar.	

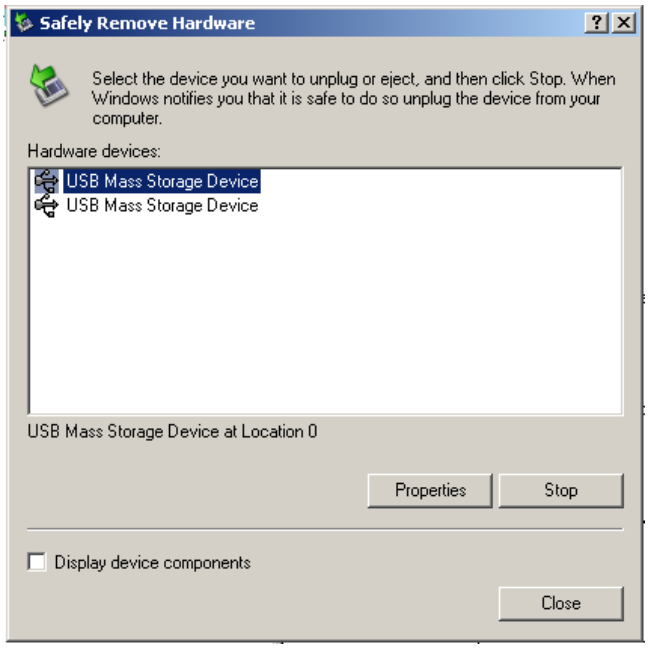
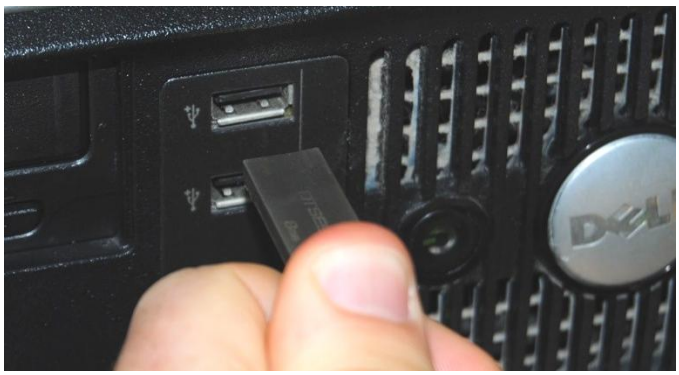
12.	Again, press the “CTRL” (control) key and the letter “A” key at the same time on the keyboard to Select All of your drawing. Then click on the “Convert Selected Graphics to Embroidery” button on the top of the screen. A brief message appears that says “Graphics Mode -> Embroidery Mode.”	
13.	If your image appears outside the red lines of the margins, move it inside the red margins. **Tip:** the threads only appear pink because your drawing is currently selected.	
14.	Press the “CTRL” (control) key and the letter “A” key at the same time on the keyboard to Select All of your drawing. Then click on a colour at the bottom of the screen. I clicked on “Blue.” **Tip:** to show the palette, select **Window -> Color Palettes -> Default CMYK**. **Tip:** your design should only be one colour.	

15.	Check your drawing for any errors and fix anything as necessary. **Tip:** I notice the maple leaves are not showing up properly in my drawing. I have a chance to fix it before I move on. To fix this, I went back and applied a 1.5px outline to the leaves in Graphics Mode.	  LEAVES NOT RIGHT LEAVES CORRECTED
16.	You can visualize the embroidered project by clicking the "**Visualizer**" button which looks like a pair of glasses. **Tip:** you can zoom in to view the stitches up close by scrolling in with your mouse.	 

17.	Select the **MC350E** embroidery machine from the machine drop-down menu.	
18.	Select **Hoop A** from the hoop drop-down menu.	
19.	Resize your drawing so it fits within the red margins. **Tip: t**o resize your drawing, press the “CTRL” (control) key and the letter “A” key at the same time on the keyboard to Select All of your drawing, and then resize it using one of the corner handles. **Tip**: a “corner handle” is a square black dot that appears at each of the four corners of your drawing when it is selected.	

20.	Save your embroidery design to your H:\ drive. **Tip:** give your drawing a meaningful name so it is easy to find later.	
21.	Print your embroidery design to the correct printer. **Tip:** this will print out your "Production Worksheet." **Tip:** if you are not sure what printer to select, ask your instructor.	 

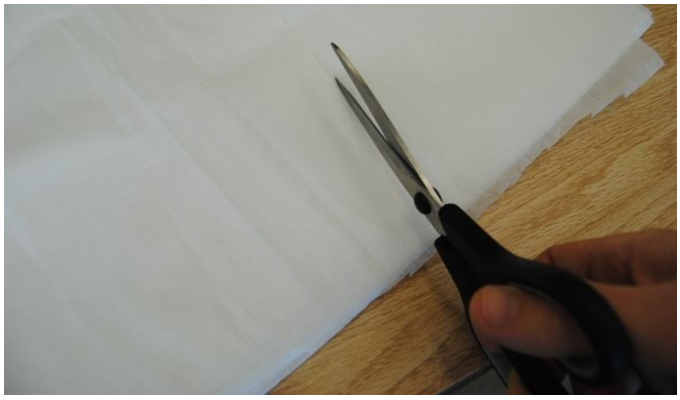
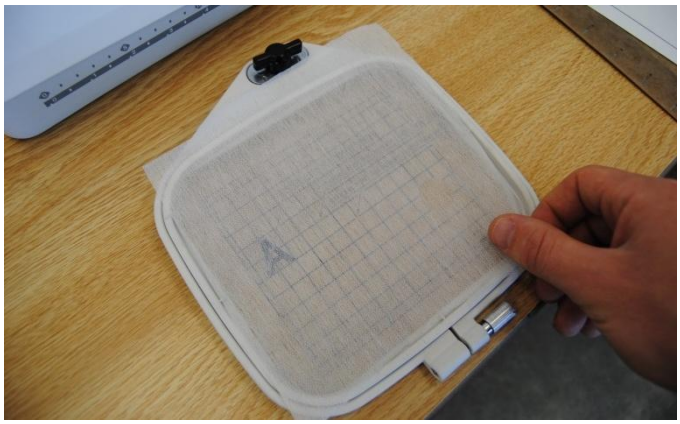
22.	Insert a USB memory stick to one of the computer's USB ports. **Tip:** wait 30 to 60 seconds for the computer to recognize the memory stick before going on to the next step.	
23.	Click the "**Write To Card**" button.	
24.	Click the "**Write**" button. **Tip:** this button looks like a red arrow, and is located above the "Close" button on the left side of this window. **Tip:** Wait about 10 seconds before going on to the next step.	

25.	Find the “Safely Remove Hardware” icon. **If you can’t find this icon, you may skip this step.** Click on the “Safely Remove Hardware” icon, find the “USB Mass Storage Device” in the list and click the “Stop” button. **Tip:** the “Safely Remove Hardware” icon might be located in the task bar, or on your main login menu.	Safely Remove Hardware icon 
26.	Remove the USB memory stick from the computer. **Tip:** There are no further steps involving the computer. You may now log out.	

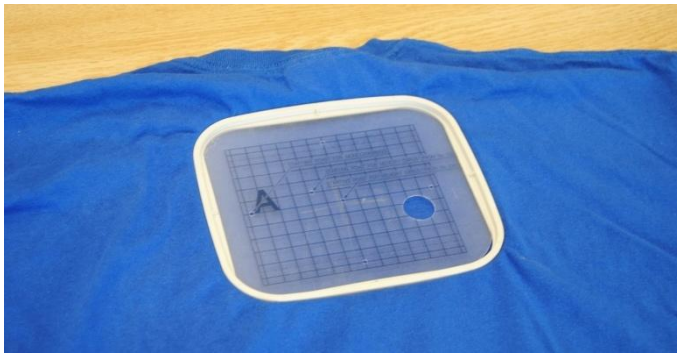
Part 3: Preparing the Fabric & Hoop

27.	Lay the fabric on your embroidery workspace table.	
28.	With chalk, draw a crosshair on the fabric where the center of your embroidery pattern will be.	
29.	Set up the tabletop ironing board. **Tip:** do not use the iron rest.	
30.	Be sure the iron is unplugged, and all settings are in the OFF position before completing this step. Open the water fill hole cover on the iron, and fill the iron with water to the appropriate level at the	

	sink. Close the water fill hole cover. **Tip:** do not overfill the water reservoir beyond the maximum fill level. **Tip:** to familiarize yourself with the parts of an iron, refer to "**Features of an Iron**" on Page 30.	
31.	Plug the iron in and set the temperature and steam settings to the appropriate level for your material. This is usually located on the garment label. **Tip:** Be sure that all settings are in the off position before plugging in to avoid electric shock. **Tip:** refer to the "**Ironing Guide**" on Page 31.	
32.	Set the iron upright on the table while it heats up to the correct temperature. **Tip:** always point the hot surface of the iron away from your workspace and away from others who might touch it by accident.	

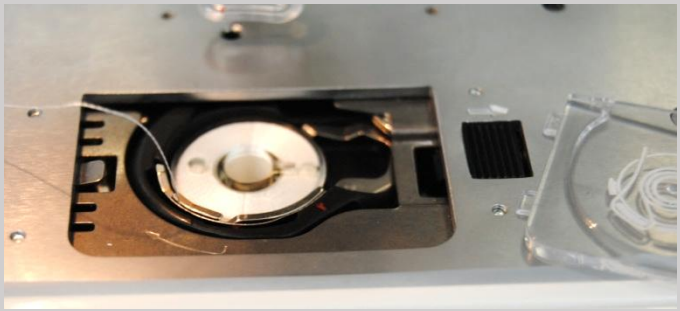
33.	Cut enough stabilizer backing for the hoop you will be using. **Tip:** the Embroidery Production sheet will tell you if you need one or two layers of stabilizer. **Tip:** refer to the "**Stabilizers**" sheet on Page 32.	 
34.	Put the stabilizer on the back side of your fabric. **Tip:** be sure to line it up with the chalk line you made earlier. **Tip:** the stabilizer is sticky on one side only. Ensure the bumps (sticky side) will be sticking to the back of the fabric you wish to embroider.	

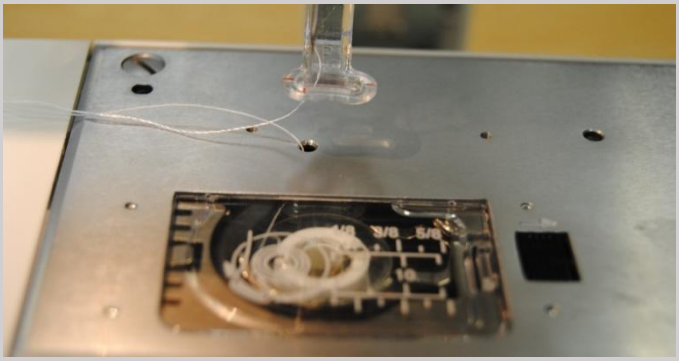
35.	When the iron is at full heat, apply heat to the correct area of the material with the stabilizer directly beneath it. **Tip:** never place the iron directly on the bumpy/shiny side of the stabilizer. **Tip:** press the steam button to apply extra steam if necessary.	
36.	Unplug the iron, and empty any excess water in the sink.	
37.	Return the iron to the table, and allow it to cool down in the upright position. **Tip:** the iron will still be very hot. Face the hot surface safely away from your workspace and others.	

38.	Place the fabric, with stabilizer attached to the back, in the embroidery hoop. The large side of the hoop goes beneath the fabric, and the smaller side goes above. **Tip:** line up the hoop with the chalk marks you made on the fabric earlier.	
39.	Push the two parts of the hoop together with the fabric between them, and tighten the tightening screw as necessary. **Tip:** do not overtighten the hoop. **Tip:** refer to "**Setting the Fabric in an Embroidery Hoop**" on Page 33.	

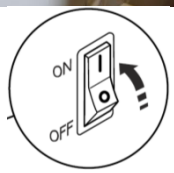
Part 4: Setting up the Embroidery Machine

Your instructor might have already done these steps for you.

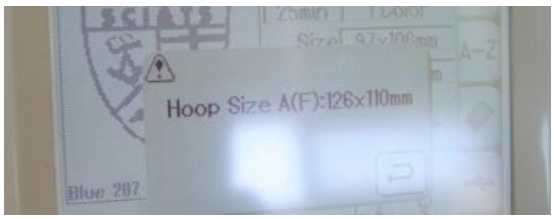
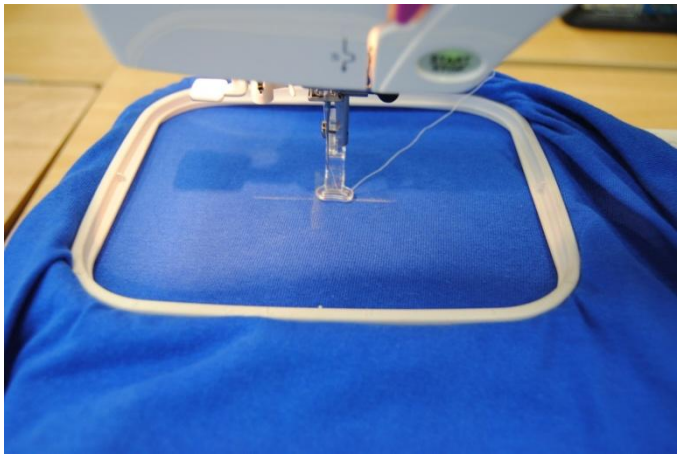
40.	Take the dust cover off of the embroidery machine. **Tip:** leave the embroidery machine power off during these next steps.	
41.	Remove the bobbin cover and insert the bobbin; then replace the bobbin cover. **Tip:** refer to the instructions at the end of this booklet for "**Inserting the Bobbin**."	
42.	Thread the embroidery machine. **Tip:** refer to the instructions at the end of this booklet for "**Threading the Embroidery Machine**." **Tip:** this embroidery machine has a needle threader to assist in threading the needle.	

43.	Draw up the bobbin thread. **Tip:** refer to the instructions at the end of this booklet for "**Drawing Up the Bobbin Thread**."	
44.	Attach the embroidery hoop to the embroidery machine. **Tip:** refer to the instructions at the end of this booklet for "Attaching the Embroidery Hoop to the Machine."	

Part 5: Embroidering Your Project on the Embroidery Machine

45.	Open the USB cover on the right side of embroidery machine. **Tip:** the machine should be powered off.	
46.	Insert the USB memory stick into the USB slot of the embroidery machine.	
47.	Turn on embroidery machine.	 

48.	With your finger, tap the USB symbol on the embroidery machine screen. **Tip:** The USB symbol looks like this: **Tip:** do not remove or insert the USB stick while waiting for the embroidery machine to access the USB memory stick.	
49.	Select the **MyDesign** folder.	

50.	Select your design.	
51.	Check that you are using the correct hoop, and then click the “return” arrow on the embroidery machine touch screen.	
52.	You are now ready to sew, and can check the details of your design on the screen.	
53.	Lower the presser foot.	

54.	Click the **START/STOP** button to begin embroidering. **Tip:** if something goes wrong, press the START/STOP button at any time to stop the embroidering.	
55.	Wait for the embroidery to complete. **Tip:** this might take between 10 and 20 minutes.	
56.	If the machine gives an error message or stops at any time, tell your instructor.	

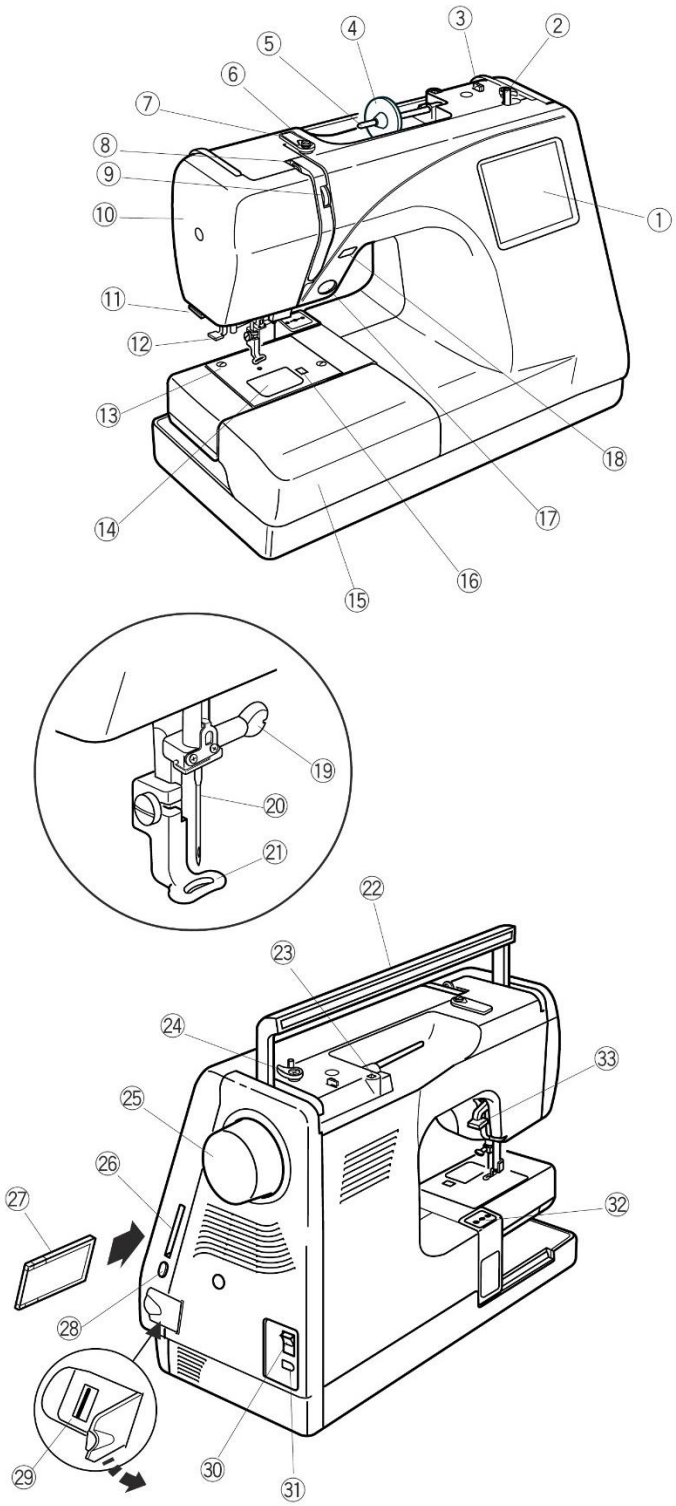
57.	When the embroidery has completed, raise the presser foot by lifting the grey presser foot lifter.	
58.	Remove the hoop from the embroidery machine.	
59.	Remove the fabric from the hoop. **Tip:** loosen the tightening screw to release the hoop.	

60.	Using a stitch ripper or sharp scissors, remove the excess threads.	
61.	Turn the embroidery machine off.	
62.	Remove the USB memory stick, and close the USB door.	

63.	Replace the embroidery machine dust cover.	
64.	Enjoy your embroidered design, and hand it in to your instructor with the appropriate accompanying materials.	

Embroidery Machine

Embroidery Machine: Front, Needle, & Rear Views



KNOW YOUR MACHINE

Names of Parts

① Visual touch screen
② Bobbin winder spindle
③ Bobbin thread cutter
④ Spool holder (large)
⑤ Spool pin
⑥ Bobbin winding thread guide
⑦ Thread guide plate
⑧ Thread take-up lever
⑨ Thread tension dial
⑩ Face plate
⑪ Thread cutter & thread holder
⑫ Needle threader
⑬ Needle plate
⑭ Hook cover plate
⑮ Extension table (accessory box)
⑯ Hook cover plate release button
⑰ Start/stop button
⑱ Auto thread cutter button
⑲ Needle clamp screw
⑳ Needle
㉑ Embroidery foot

㉒ Carrying handle
㉓ Hole for additional spool pin
㉔ Bobbin winder stopper
㉕ Handwheel
㉖ PC card slot
㉗ PC card (optional item)
㉘ Card eject button
㉙ USB socket (for usb memory)
㉚ Power switch
㉛ Machine socket
㉜ Carriage (for embroidery)
㉝ Presser foot lifter

Note: the user manual for the Janome Memory Craft 350E can be found at:
http://content.janome.com/documents/File/ManualFile/Inst%20book%20MC350E.pdf

Embroidery Production Worksheet

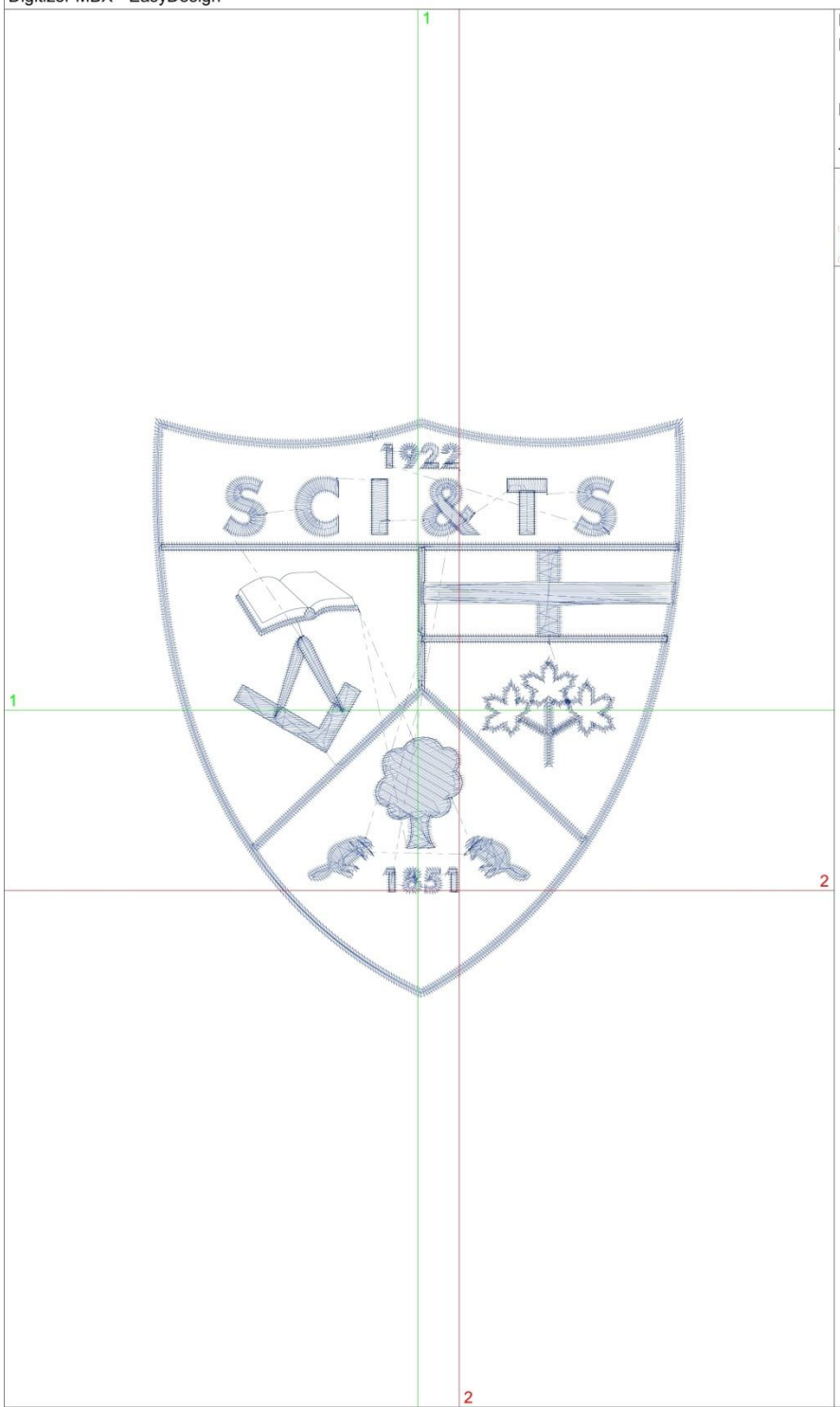
Production Worksheet
SCITS_CREST_2014
Digitizer MBX - EasyDesign

Stitches: 9122
Colors: 1
Zoom: 1:1
3.84 in
4.18 in

Fabric:	Pure Cotton
Required Stabilizer:	Topping: Backing: Tear Away x 2
Hoop :	Hoop A(F) (126 x 110) Ver.3.0
Total Bobbin:	47.57ft

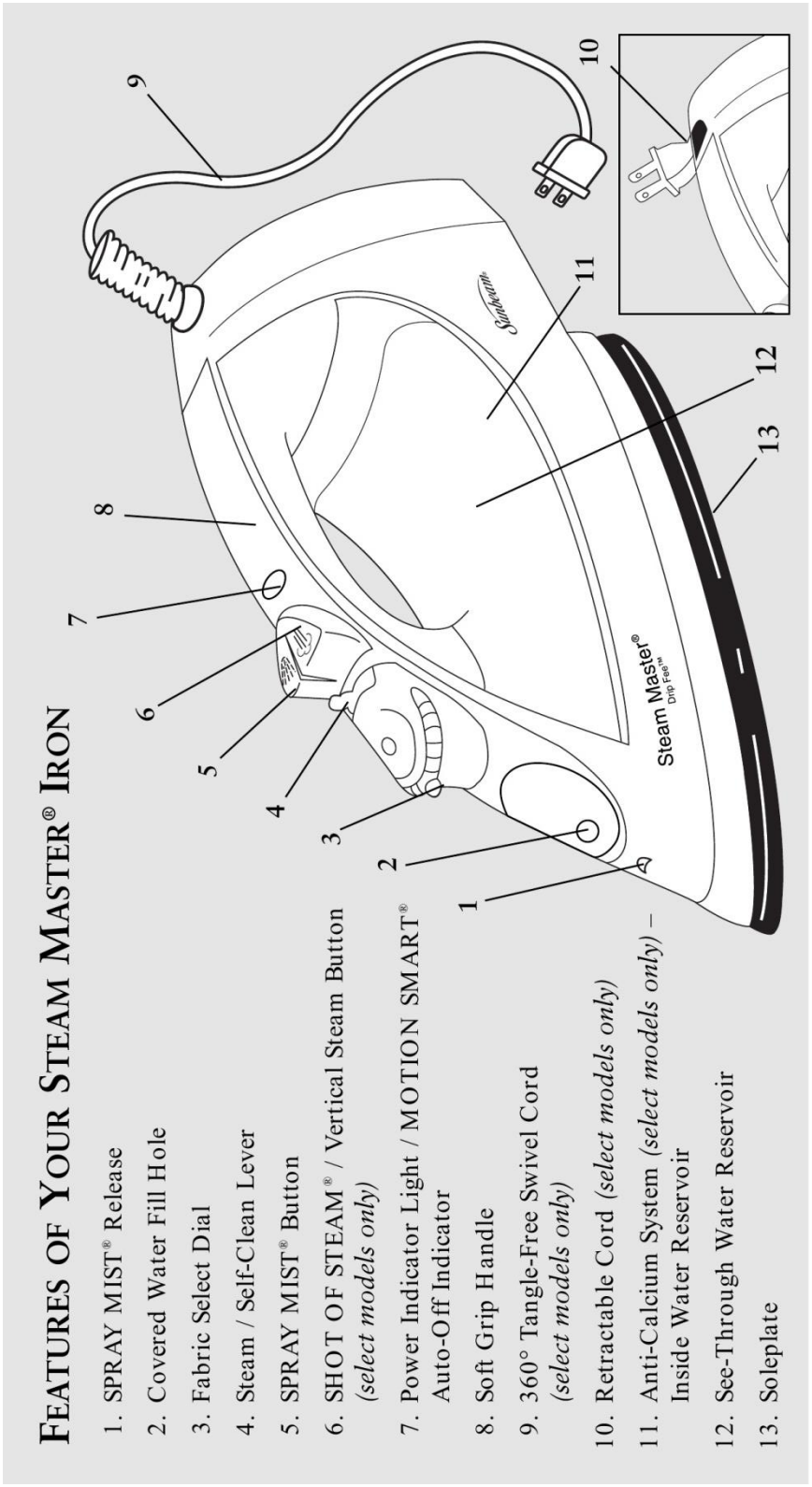
Color Sequence:

	Brand	Code	Description	Thread
■	Janome	207	Blue	140.14ft



Page 1 of 1

Features of an Iron


FEATURES OF YOUR STEAM MASTER® IRON
1. SPRAY MIST® Release
2. Covered Water Fill Hole
3. Fabric Select Dial
4. Steam / Self-Clean Lever
5. SPRAY MIST® Button
6. SHOT OF STEAM® / Vertical Steam Button (select models only)
7. Power Indicator Light / MOTION SMART® Auto-Off Indicator
8. Soft Grip Handle
9. 360° Tangle-Free Swivel Cord (select models only)
10. Retractable Cord (select models only)
11. Anti-Calcium System (select models only) – Inside Water Reservoir
12. See-Through Water Reservoir
13. Soleplate
Steam Master®
Drip Free™
Sunbeam

Note: Our iron is a Black & Decker IR08x Iron. The above iron is similar in style but may have slightly different features.

Ironing Guide

IRONING GUIDE

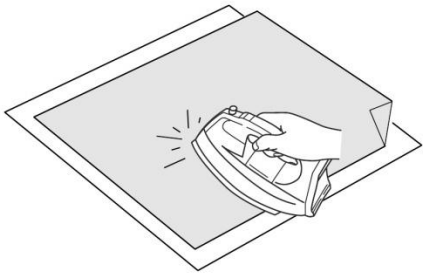
FABRIC	SUGGESTED STEAM SETTING	FABRIC SELECT DIAL SETTING	IRONING RECOMMENDATIONS
Acrylic	O/Off (Dry)	Synthetic	Iron garment inside out
Acetate	O/Off (Dry)	Synthetic	Iron garment inside out while still damp.
Polyester	O/Off (Dry)	Synthetic	Iron garment inside out while still damp.
Rayon	O/Off (Dry)	Synthetic	Iron garment inside out.
Silk	O/Off (Dry)	Silk	Iron garment inside out. Use an ironing cloth* to prevent shine marks.
Viscose	O/Off (Dry)	Silk	Mainly dry iron; steam may be used under garment manufacturer's instructions.
Nylon	O/Off (Dry)	Silk	Iron garment inside out while still damp.
Wool	Steam	Wool	Iron garment inside out or use an ironing cloth.*
Wool Blends	Steam	Wool	Iron garment inside out or use an ironing cloth.*
Cotton Blends	Steam	Cotton	Follow garment manufacturer's instructions. Use setting for the fiber requiring the lowest setting.
Corduroy	Steam	Cotton	Iron garment inside out or use an ironing cloth* and then brush the garment with your hand to raise the texture of the fabric.
Cotton	Steam	Cotton	Iron dark fabrics inside out to prevent shine marks.
Linen	Steam	Linen	Iron garment inside out or use an ironing cloth* to prevent shine marks *(especially on dark fabrics).*
Denim	Steam	Linen	Use the SPRAY MIST® feature and/or the SHOT OF STEAM® for deeper penetration to remove wrinkles.

**An ironing cloth is a cotton, dry-cleaned cloth that you place over the garment you are ironing to prevent the fabric from looking shiny.*

Note: Some fabrics may require more steam than others. Your iron has the capability to adjust steam as needed.

Source: http://www.sunbeam.com/service-%26-support/product-support/instruction-manuals/garment-care/sunbeam%C2%AE-steam-master%C2%AE-iron/garment-care-steam-master-iron-manual.html

Stabilizers



Adhesive (Iron-on) Stabilizer
Place the Wrong side of fabric and the glossy side of the stabilizer together. Fold up a corner of the stabilizer and fuse it with an iron.

NOTES:
- Fold up a corner of the stabilizer, to make it easier to peel off the excess stabilizer after stitching.
- Ironing temperatures vary depending on kind of adhesive type stabilizer.

StabilizerS

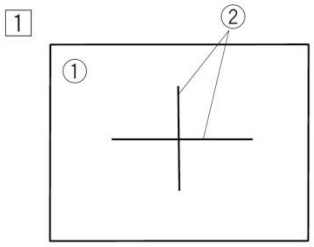
To obtain the best quality embroidery, it is important to use stabilizers.

Types of stabilizer

Tear-away Stabilizer is made from a fiber that will tear easily. Use tear-away stabilizers for stable woven fabrics. After stitching, tear away the stabilizer so that the small portion left in the back of the stitching will not affect the wear.
Iron-on Stabilizer is an adhesive type stabilizer for knits and all kinds of unstable fabrics. Fuse it to the wrong side of the fabrics with an iron.
Cut-away Stabilizer is a non-woven fabric that does not tear. Cut the excess portion after stitching. Use cutaway
stabilizers for knits and all kinds of unstable fabrics.
Water Soluble Stabilizer will dissolve in water. Use this stabilizer for cutwork or lace embroidery, and also for the right side of looped fabrics such as towel to avoid loops coming through the embroidery.
Sticky Stabilizer is a sticky paper used for securing a small fabric or work that cannot be secured in the hoop.
It is also used for velvet and other napped fabric that would be permanently marked by the hoop.

Usage:
- The stabilizer should be attached to the wrong side of fabric.
- More than one layer may be required.
- Felt or stable fabrics do not need to be stabilized and you may embroider directly on it.
- For firm fabrics, you may place a thin paper under the fabric.
- The non-adhesive type should be used when embroidering fabric, which cannot be ironed or for sections, which are difficult to iron.
- Cut the stabilizer larger than the embroidery hoop and set it on the hoop so that the entire piece is fastened with the hoop to prevent looseness of the fabric.

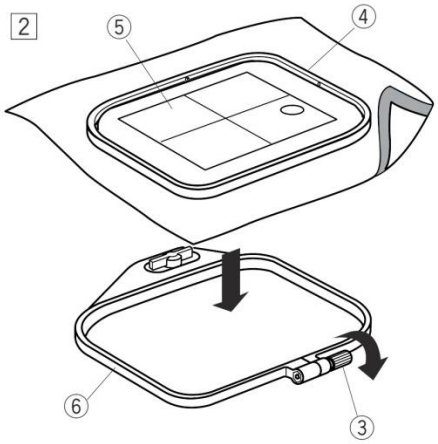
Setting the Fabric in an Embroidery Hoop



Setting the Fabric in an Embroidery Hoop

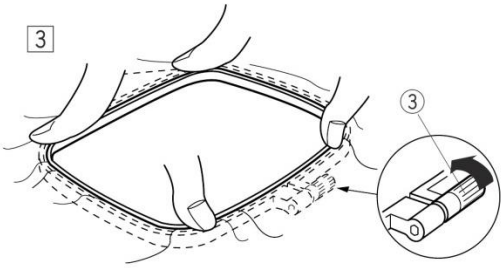
1 Mark the centerlines on the right side of the fabric with tailor's chalk.

① Fabric
② Centerlines



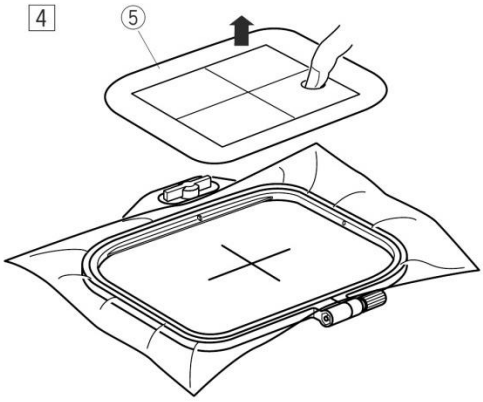
2 Loosen the hoop tightening screw of the outer hoop and lay the fabric and the inner hoop over the outer hoop.
Place the template over the fabric, matching centerlines.

③ Hoop tightening screw
④ Inner hoop
⑤ Template



3 Set the inner hoop into the outer hoop and tighten the hoop tightening screw.

⑥ Outer hooop

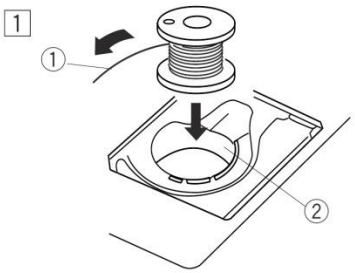


4 Remove the template.

NOTES:
When placing the fabric on the embroidery hoop, place the outer hoop on a flat surface.
For thin and stretchy fabrics, use an adhesive type stabilizer (iron-on type) on the wrong side of the fabric. More than one layer of the stabilizer may be required.

The Cloth Setter 10000 (optional Item) is very helpful when setting a fabric to a hoop in the right position.

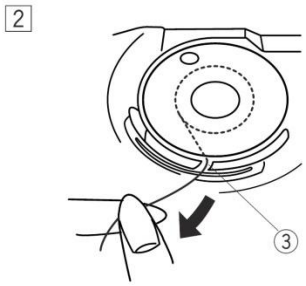
Inserting the Bobbin



Inserting the bobbin

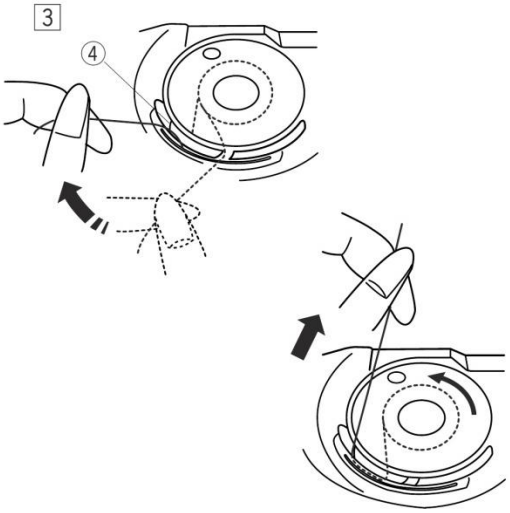
1 Place the Bobbin in the Bobbin Holder with the thread running off in the counterclockwise direction.

① Thread
② Bobbin holder



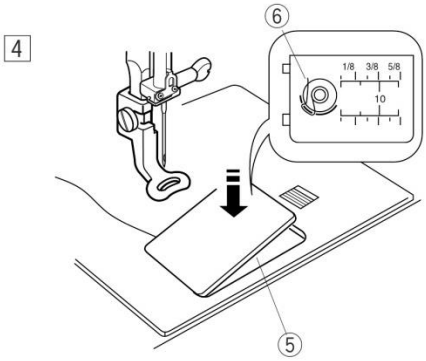
2 Guide the thread into front notch on the front of the bobbin holder.
Draw the thread to the left, sliding it between the tension spring blades.

③ Front notch



3 Continue to draw the thread lightly until the thread slips into side notch.
Pull out about 10 cm (4") of thread to the rear.

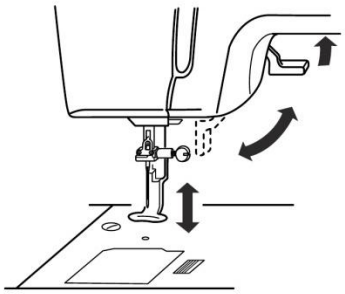
④ Side notch



4 Refer to the threading chart shown on the hook cover plate.
Reattach the hook cover plate.

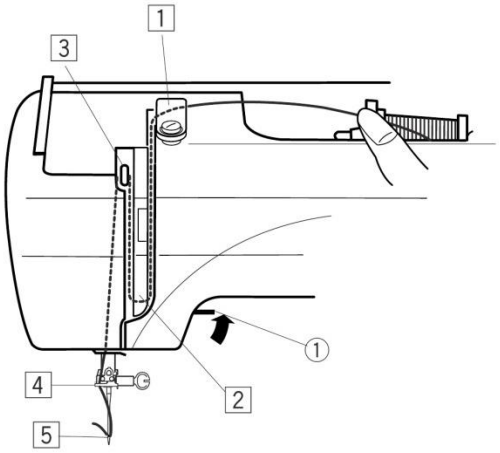
⑤ Hook cover plate
⑥ Threading chart

Threading the Embroidery Machine



Raising the Presser Foot

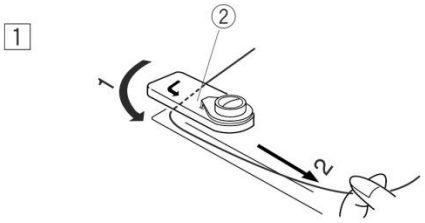
The presser foot lifter raises and lowers the presser foot.
You can raise the presser foot about 6 mm (1/4") higher than the normal up position by exerting more pressure when lifting the presser foot lifter.

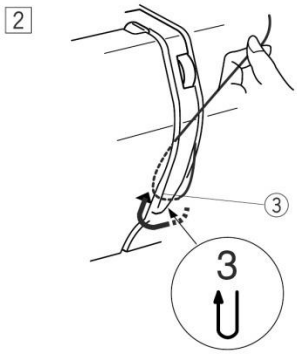


Threading the Machine

1 Raise the presser foot lifter. Turn the handwheel to bring the needle to its highest position. Draw the thread around and under the thread guide while holding the thread at the spool. Then draw the thread down through the right channel of the thread guide plate.

① Presser foot lifter
② Thread guide

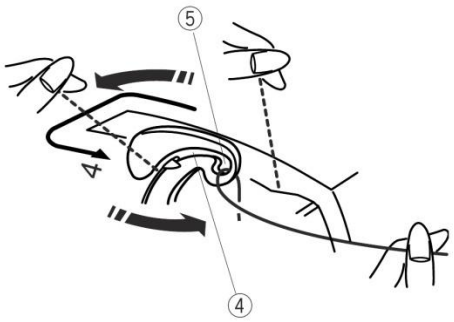




2 Firmly draw the thread around the thread guide plate and up to the thread take-up lever.

③ Thread guide plate

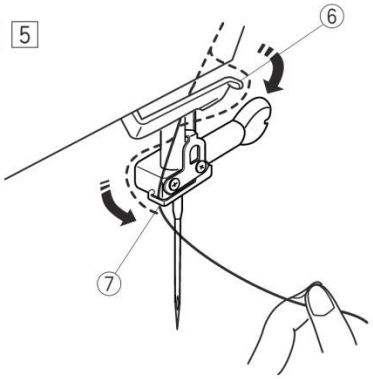
3



3 Slip the thread through the slit and down into the eye of the take-up lever as shown. Draw the thread down through the left channel.

④ Slit
⑤ Eye of the take-up lever

4 5



4 Slip the thread behind the lower thread guide from the right.

⑥ Lower thread guide

5 Slip the thread in the needle bar thread guide from the left.

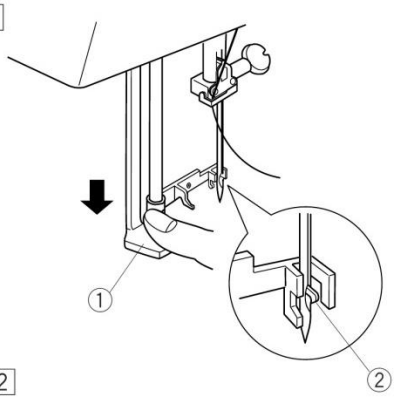
⑦ Needle bar thread guide

Thread the needle from front to back by hand or use the built-in needle threader.

NOTE:
Refer to page 11 for built-in needle threader

Needle Threader

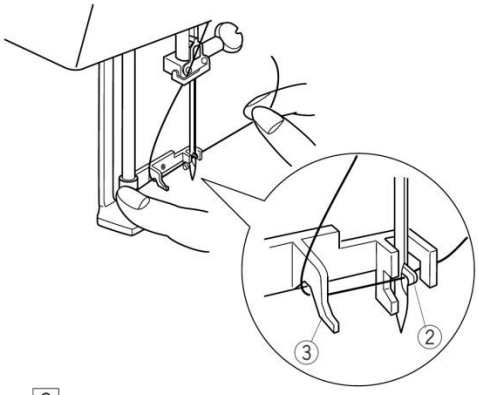
1



1 Lower the presser foot. Depress the needle threader knob as far as it will go. The hook comes out through the needle eye from behind.

① Needle threader knob
② Hook

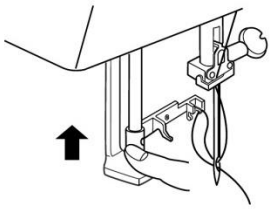
2



2 Draw the thread down around the threader guide and under the hook.

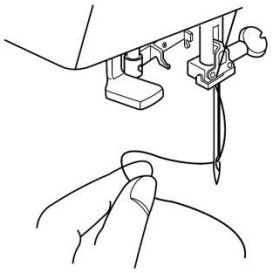
③ Threader guide

3



3 Release the threader knob slowly while holding the thread end with your hand. A loop of the thread is pulled up through the needle eye.

4

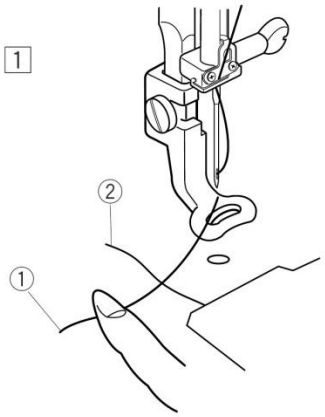


4 Remove the loop from the threader and pull out the thread end from the needle eye.

NOTES:
The needle threader works well with the threads #50-90 and needles #11-16, the blue tipped needle as well.

If the needle stops too low to use the needle threader after the automatic thread cutting, raise the needle to its highest position by turning the handwheel.

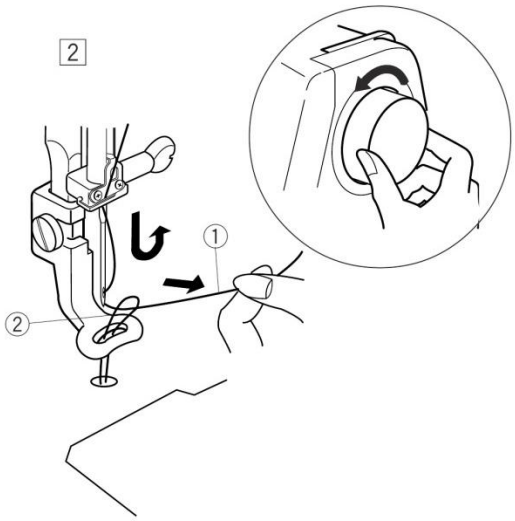
Drawing Up the Bobbin Thread



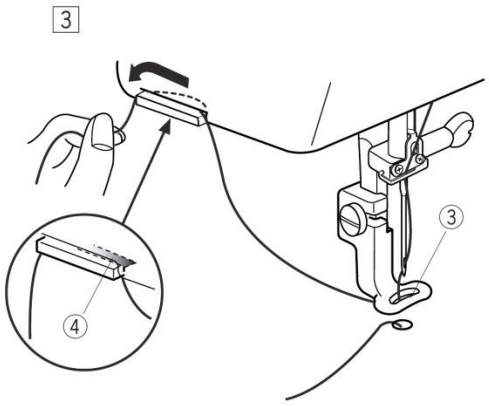
Drawing up the Bobbin Thread

1 Raise the presser foot lifter. Hold the needle thread with your finger.

① Needle thread
② Bobbin thread



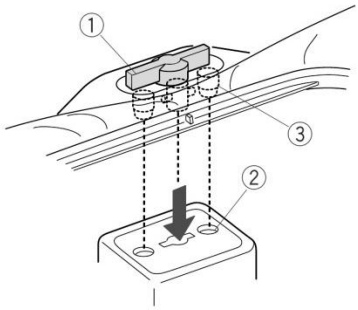
2 Turn the handwheel one complete turn toward you. Draw the needle thread to bring up a loop of the bobbin thread.



3 Pass the needle thread through the hole in the embroidery foot and draw it up to the thread holder leaving an inch of free thread.

③ Hole
④ Thread holder

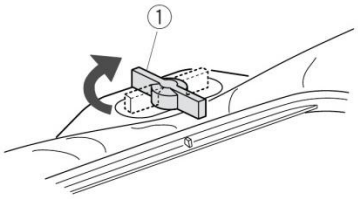
Attaching the Embroidery Hoop to the Machine



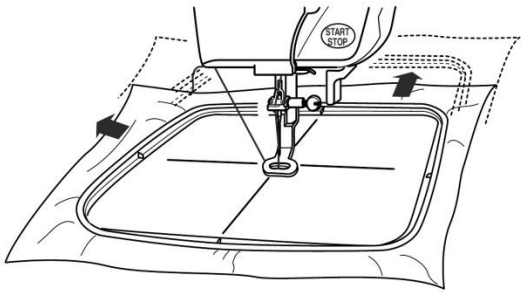
Attaching the Embroidery Hoop to the Machine

Turn the attaching knob so it is parallel with the hoop, and set it on the carriage.
Attach the hoop by fitting the pins into the carriage holes.

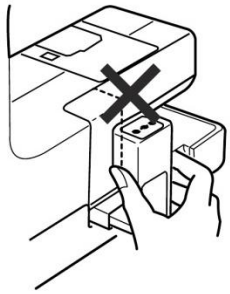
① Attaching knob
② Carriage holes
③ Pins



Turn the attaching knob clockwise.



⚠CAUTION:
Always provide sufficient clearance for the embroidery carriage behind your machine before starting the machine.
Never try to move the carriage by hand or touch the carriage while it is moving.
Make sure to return the carriage to the home position before turning the power off.



Troubleshooting the Embroidery Machine

Troubleshooting

Problem:	Cause:	Reference:
The machine is noisy	1 Threads have been caught in the hook mechanism.	See page 47.
The needle thread breaks.	1 The needle thread is not threaded properly. 2 The needle thread tension is too tight. 3 The needle is bent or blunt. 4 The needle is inserted incorrectly. 5 The needle thread is not set in the thread holder when starting the machine.	See pages 9, 10. See page 13. See page 14. See page 14. See page 12.
The bobbin thread breaks.	1 The bobbin thread is not threaded properly in the bobbin holder. 2 Lint has collected in the bobbin holder. 3 The bobbin is damaged and does not turn smoothly.	See page 8. See page 47. Replace the bobbin.
The needle breaks.	1 The needle is inserted incorrectly 2 The needle is bent or blunt. 3 The needle clamp screw is loose. 4 The needle thread tension is too tight.	See page 14 See page 14. See page 14. See page 13.
Visual Touch Screen is not clear.	1 The screen contrast of the visual touch screen is not adjusted correctly.	See page 21.
Skipped stitches.	1 The needle is inserted incorrectly. 2 The needle is bent or blunt. 3 The needle thread is not threaded properly. 4 The defective needle (rusted, burred needle eye) is used. 5 The embroidery hoop is not set properly. 6 The fabric is not tightly pulled on the embroidery hoop. 7 A stabilizer is not being used.	See page 14. See page 14. See pages 9, 10 Replace the needle. See page 18. See page 17. See page 16.
The machine does not run.	1 A thread is caught in the hook race. 2 The control circuit is not working correctly. 3 The machine is not connected to the power supply.	See page 47. Turn the switch off and turn it on again. See page 5.
Abnormal noise occurs when the machine is switched on.	1 Something is caught between the carriage and the arm. 2 The carriage is touching something around the machine.	Remove the object. See page 18.
Patterns are distorted.	1 The fabric is not pulled tightly on the embroidery hoop. 2 The embroider hoop is not fixed securely. 3 The carriage is bumping into something around the machine. 4 The fabric is caught or pulled for some reason when sewing embroidery. 5 The needle thread tension is too tight. 6 A stabilizer is not used.	See page 17. See page 18. See page 18. Stop the machine and free the fabric. See page 13. See page 16.
Pattern selection keys do not work.	1 Key position is not adjusted properly. 2 The control circuit is not working correctly. 3 The bobbin winder spindle is in the winding position.	See page 22. Turn the switch off and turn it on again. See page 7.
PC card or USB memory does not work	1 The card or USB memory is not inserted correctly	See pages 35, 36.